

**IN THE CLAIMS:**

1. A method for rendering a graphical user interface (GUI), comprising:  
providing for the representation of the GUI as a set of controls wherein the controls are organized in a logical hierarchy;  
traversing the representation, wherein the traversing comprises:  
associating a theme with a first control in the set of controls;  
rendering the first control according to the theme;  
rendering any descendants of the first control according to the theme;  
wherein any descendants of the first control can override the theme; and  
wherein one of the set of controls can communicate with another of the set of controls.
2. The method of claim 1 wherein:  
one of the set of controls can respond to an event raised by another of the set of controls.
3. The method of claim 1 wherein:  
a control can have an interchangeable persistence mechanism.
4. The method of claim 1 wherein:  
a control can have an interchangeable rendering mechanism.
5. The method of claim 1, further comprising:  
accepting a request.
6. The method of claim 5 wherein:  
the request in a hypertext transfer protocol (HTTP) request.
7. The method of claim 5 wherein:  
the request originates from a Web browser.
8. The method of claim 1, further comprising:  
generating a response.

9. The method of claim 1 wherein:

an control can represent one of: button, text field, menu, table, window, window control, title bar, pop-up window, check-box button, radio button, window frame, desktop, shell, head, body, header, footer, book, page, layout, placeholder, portlet and toggle button.

10. The method of claim 1 wherein:

associating the theme with the first control can occur when the first control is rendered.

11. The method of claim 1 wherein:

the first control inherits the theme from a parent control.

12. The method of claim 1 wherein:

the theme specifies the appearance and/or functioning of an control in the GUI.

13. The method of claim 1 wherein:

rendering the first control according to the theme can be accomplished in parallel with rendering of other controls.

14. The method of claim 1 wherein:

the theme can be specified in whole or in part by a properties file.

15. The method of claim 14 wherein:

the properties file can include at least one of: 1) cascading style sheet; 2) Java Server Page; 3) Extensible Markup Language; 4) text; 5) Hypertext Markup Language; 6) Extensible Hypertext Markup Language; 7) JavaScript; and 8) Flash MX.

16. The method of claim 14 wherein:

the properties file can specify at least one image.

17. The method of claim 1 wherein:  
the GUI is part of a portal on the World Wide Web.
18. A method for rendering a graphical user interface (GUI), comprising:  
accepting a request;  
mapping the request to a set of controls that represent the GUI, and wherein  
the controls are organized in a logical hierarchy;  
traversing the representation, wherein the traversing comprises:  
associating a theme with a first control in the set of controls;  
rendering the first control according to the theme;  
rendering any descendants of the first control according to the theme;  
and  
wherein any descendants of the first control can override the theme.
19. The method of claim 18 wherein:  
the request in a hypertext transfer protocol (HTTP) request.
20. The method of claim 18 wherein:  
the request originates from a Web browser.
21. The method of claim 18, further comprising:  
generating a response.
22. The method of claim 1 wherein:  
one of the set of controls can respond to an event raised by another of the set  
of controls.
23. The method of claim 1 wherein:  
a control can have an interchangeable persistence mechanism.
24. The method of claim 1 wherein:  
a control can have an interchangeable rendering mechanism.
25. The method of claim 18 wherein:

an control can represent one of: button, text field, menu, table, window, window control, title bar, pop-up window, check-box button, radio button, window frame, desktop, shell, head, body, header, footer, book, page, layout, placeholder, portlet and toggle button.

26. The method of claim 18 wherein:

associating a theme with the first control can occur when the first control is rendered.

27. The method of claim 18 wherein:

the first control inherits the theme from a parent control.

28. The method of claim 18 wherein:

the theme specifies the appearance and/or functioning of an control in the GUI.

29. The method of claim 18 wherein:

rendering the first control according to the theme can be accomplished in parallel with rendering of other controls.

30. The method of claim 18 wherein:

the theme can be specified in whole or in part by a properties file.

31. The method of claim 30 wherein:

the properties file can include at least one of: 1) cascading style sheet; 2) Java Server Page; 3) Extensible Markup Language; 4) text; 5) Hypertext Markup Language; 6) Extensible Hypertext Markup Language; 7) JavaScript; and 8) Flash MX.

32. The method of claim 30 wherein:

the properties file can specify at least one image.

33. The method of claim 18 wherein:

the GUI is part of a portal on the World Wide Web.

34. A method for rendering a graphical user interface (GUI), comprising:  
providing for the representation of the GUI as a plurality of controls wherein  
the controls are organized in a logical hierarchy;  
traversing the representation, wherein the traversing comprises:  
    associating a first theme with a first control in the plurality of controls;  
    rendering the first control according to the first theme;  
    associating a second theme with a second control in the plurality of  
    controls;  
    rendering the second control according to the second theme; and  
    wherein the second control is a descendant of the first control.
35. The method of claim 34, further comprising:  
accepting a request.
36. The method of claim 35 wherein:  
the request in a hypertext transfer protocol (HTTP) request.
37. The method of claim 35 wherein:  
the request originates from a Web browser.
38. The method of claim 34, further comprising:  
generating a response.
39. The method of claim 1 wherein:  
the first control can respond to an event raised by the second control.
40. The method of claim 1 wherein:  
an control can have an interchangeable persistence mechanism.
41. The method of claim 1 wherein:  
an control can have an interchangeable rendering mechanism.
42. The method of claim 34 wherein:

an control can represent one of: button, text field, menu, table, window, window control, title bar, pop-up window, check-box button, radio button, window frame, desktop, shell, head, body, header, footer, book, page, layout, placeholder, portlet and toggle button.

43. The method of claim 34 wherein:  
the first control inherits the first theme from a parent control.
44. The method of claim 34 wherein:  
the first theme specifies the appearance and/or functioning of the first control in the GUI.
45. The method of claim 34 wherein:  
the rendering the first control can be accomplished in parallel with the rendering of the second control.
46. The method of claim 34 wherein:  
a theme can be specified in whole or in part by a properties file.
47. The method of claim 46 wherein:  
the properties file can include at least one of: 1) cascading style sheet; 2) Java Server Page; 3) Extensible Markup Language; 4) text; 5) Hypertext Markup Language; 6) Extensible Hypertext Markup Language; 7) JavaScript; and 8) Flash MX.
48. The method of claim 46 wherein:  
the properties file can specify at least one image.
49. The method of claim 34 wherein:  
the GUI is part of a portal on the World Wide Web.
50. A machine readable medium having instructions stored thereon that when executed by a processor cause a system to:

provide for the representation of the GUI as a set of controls wherein the controls are organized in a logical hierarchy;

traverse the representation, wherein the traversing comprises instructions to cause the system to:

associate theme with a first control in the set of controls;

render the first control according to the theme;

render any descendants of the first control according to the theme;

wherein any descendants of the first control can override the theme; and

wherein one of the set of controls can communicate with another of the set of controls.

51. The machine readable medium of claim 50 wherein:

one of the set of controls can respond to an event raised by another of the set of controls.

52. The machine readable medium of claim 50 wherein:

a control can have an interchangeable persistence mechanism.

53. The machine readable medium of claim 50 wherein:

a control can have an interchangeable rendering mechanism.

54. The machine readable medium of claim 50, further comprising instructions that when executed cause the system to:

accept a request.

55. The machine readable medium of claim 54 wherein:

the request in a hypertext transfer protocol (HTTP) request.

56. The machine readable medium of claim 54 wherein:

the request originates from a Web browser.

57. The machine readable medium of claim 50, further comprising instructions that when executed cause the system to:

generate a response.

58. The machine readable medium of claim 50 wherein:  
an control can represent one of: button, text field, menu, table, window, window control, title bar, pop-up window, check-box button, radio button, window frame, desktop, shell, head, body, header, footer, book, page, layout, placeholder, portlet and toggle button.
59. The machine readable medium of claim 50 wherein:  
associating the theme with the first control can occur when the first control is rendered.
60. The machine readable medium of claim 50 wherein:  
the first control inherits the theme from a parent control.
61. The machine readable medium of claim 50 wherein:  
the theme specifies the appearance and/or functioning of an control in the GUI.
62. The machine readable medium of claim 50 wherein:  
rendering the first control according to the theme can be accomplished in parallel with rendering of other controls.
63. The machine readable medium of claim 50 wherein:  
the theme can be specified in whole or in part by a properties file.
64. The machine readable medium of claim 63 wherein:  
the properties file can include at least one of: 1) cascading style sheet; 2) Java Server Page; 3) Extensible Markup Language; 4) text; 5) Hypertext Markup Language; 6) Extensible Hypertext Markup Language; 7) JavaScript; and 8) Flash MX.
65. The machine readable medium of claim 63 wherein:  
the properties file can specify at least one image.

66. The machine readable medium of claim 50 wherein:  
the GUI is part of a portal on the World Wide Web.
67. A computer data signal embodied in a transmission medium, comprising:  
a code segment including instructions to provide for the representation of the  
GUI as a set of controls wherein the controls are organized in a logical hierarchy;  
a code segment including instructions to traverse the representation  
comprising:
  - a code segment including instructions to associate theme with a first  
control in the set of controls;
  - a code segment including instructions to render the first control  
according to the theme;
  - a code segment including instructions to render any descendants of the  
first control according to the theme;wherein any descendants of the first control can override the theme; and  
wherein one of the set of controls can communicate with another of the set of  
controls.